

CLAIMS

What is claimed is:

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5 1. A network storage system comprising:  
virtual file system ("VFS") for storing file system information to manage a  
plurality files of said network storage system, wherein a client of said network  
storage system accesses said VFS to conduct file system operations over a first  
channel; and

10 storage center for storing a plurality files of said network storage system,  
wherein a client of said network storage system accesses said storage center to  
download files over a second channel, said second channel being different than said  
first channel.

15 2. The network storage system of claim 1, further comprising a storage  
port for accessing, at a client, said virtual file system and said storage center.

3. The network storage system of claim 2, further comprising at least  
one additional storage port for accessing said virtual file system and said storage  
center in the event of a failover condition of said storage port.

20 4. The network storage system of claim 1, wherein said storage center  
comprises:

a plurality of distributed object storage managers (DOSMs) for receiving requests to access said storage center; and

storage cluster, comprising a plurality of intelligent storage nodes, for storing files of said network storage system and for servicing access requests from said DOSMs.

5. The network storage system of claim 4, further comprising a multi-cast protocol for maintaining file information at said DOSMs regarding files stored in said intelligent storage nodes.

6. The network storage system of claim 4, wherein said DOSMs further comprise a data cache for caching at least a subset of files stored in said intelligent nodes.

7. The network storage system of claim 6, further comprising a load balancing fabric for selecting a DOSM for an access request based on demand to access said storage center, and for caching data for files in high demand in said data caches of said DOSMs.

8. The network storage system of claim 1, further comprising at least one additional storage center located geographically disparate from said storage center.

5 9. The network storage system of claim 8, further comprising a dynamic failover mechanism for servicing access requests from a disparate storage center in the event that a failure occurs in said storage center.

10 10. The network storage system of claim 1, further comprising a content delivery network coupled to said network storage system.

11. A method for storing files in a network storage system, said method comprising the steps of:

15 storing file system information in a VFS to manage a plurality of files of said network storage system;

storing a plurality files in storage center;

accessing said VFS to conduct file system operations; and

accessing said storage center to download said files of said network storage system.

20 12. The method of claim 11, further comprising the steps of:

generating, from said VFS, a file identifier for a file stored in said storage cluster;

receiving from a client, at said storage cluster, said file identifier;

retrieving said file identified from said file identifier at said storage center;

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transmitting said file from said storage center to said client.

13. The method of claim 11, further comprising the step of accessing, at a client, said virtual file system and said storage center using a storage port.

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14. The method of claim 11, further comprising the step of accessing said virtual file system and said storage center in the event of a failover condition of said storage port from at least one additional storage port.

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15. The method of claim 11, wherein the step of accessing said storage center comprises the steps of:

receiving a request for access to said storage center;

selecting one of a plurality of distributed object storage managers (DOSMs) to service said request;

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accessing an intelligent storage node from said DOSM selected to service said request.

16. The method of claim 15, further comprising the step of issuing commands from a multi-cast protocol to maintain file information at said DOSMs regarding files stored in said intelligent storage nodes.

5 17. The method of claim 15, wherein said DOSMs further comprising the step of caching at least a subset of files stored in said intelligent nodes at said DOSMs.

10 18. The method of claim 17, further comprising the steps of:  
selecting a DOSM for a download request based on demand to access said storage center; and  
caching data for files in high demand in said DOSMs.

15 19. The method of claim 11, further comprising the step of storing files at an additional storage center located geographically disparate from said storage center.

20 20. The method of claim 19, further comprising the step of servicing access requests from a disparate storage center in the event that a failure occurs in said storage center.

21. The method of claim 11, further comprising the step of accessing said storage center from a content delivery network.